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**Shellfish-Groundfish Spring Staff Meeting  
31 March - 2 April 1998, Homer, Alaska,**

by

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## INTRODUCTION

This report attempted to capture the general theme and major details of discussion during the annual staff meeting for Central Region groundfish and shellfish fisheries. In some cases, discussion notes were restructured or pooled to improve continuity and cohesiveness of the overall documentation. Meeting action items (Table 1) and a list of attendees (Table 2) are attached. The attendees list indicates all individuals who participated in this meeting, although some individuals were present for only a portion of the meeting. A variety of meeting handouts, including a meeting agenda, are also included. Requests for more information on a topic should be directed to the appropriate individual. Charlie Trowbridge and Linda Brannian reviewed this report for clarity and accuracy.

## SHELLFISH

### *Cook Inlet*

#### Clams

The commercial guideline harvest level (GHL) of 30k lb is below the 40k lb GHL set by the Board of Fisheries limit; 12 diggers were registered prior to the staff meeting. Ismailof was closed due to severe decline in relative densities; a winter die-off is thought causal. Trowbridge made an aerial survey last weekend to document fishing effort, likely a combination of recreational and commercial users. Given the historical harvests from the open in 1998, Trowbridge felt that the 1998 GHL will not be achieved in 1998. Bue will contact Baker regarding participation in one of the Kachemak Bay clam surveys. Bechtol reported that the poster on the Chugachik clam model will be displayed at the Kachemak Bay Research Conference in late April. Gustafson's 1997 survey report is near completion and the report on application of an ASA model to Chugachik Island clams, as presented at the 1997 Lowell Wakefield Symposium, has undergone preliminary review and is ready for resubmission. Prior to the next Alaska Board of Fisheries (BOF) meeting when clams are addressed, staff will research the implications of freezing temperatures on clams.

Bechtol explained we just received Tim Baker's draft project plan for the Kachemak Bay clam surveys. A list of survey dates and locations was distributed and volunteers were solicited for the surveys. Bechtol will present the poster describing the Chugachik Island clam model at the Kachemak Bay Research Conference in late April; the conference is being coordinated by Doug Coughenower, the local Marine Advisory agent.

Szarzi reported Sport Fish intends to provide logistic support to the CFM&D surveys. Szarzi also discussed the new shellfish permit system implemented in 1996, although clam harvests were not surveyed on the 1996 permit form. The 1996 mail-out survey indicated a recreational harvest of

17,800 gallons of clams, greater than the long-term mean of 13,200 gallons; one gallon equals 95-125 individual clams. The 1997 permits, not expanded for permit non-returns, reported 3,300 gallons of clams were harvested. Staff discussed the certification process for clam beaches and that commercial users are required to pay for batch certification, as well as the cost of certifying new areas. For the 1999 staff meeting, Szarzi will try to prepare a summary of recreational clam effort to identify areas of significant user group overlap.

For Tanner crab, 80% of 1996 permits were returned for an estimated, unexpanded, Tanner crab harvest of 11,600 lb, which compared to a statewide mail-out survey estimate of 3,800 lb. With 65% of 1997 permits returned, the unadjusted Tanner harvests were substantially reduced at 4,400 lb (the 1981-1996 mean was 4,400 lb).

### Dungeness

Trowbridge stated a single survey will be conducted in August 1998. A charter vessel is used instead of the relatively deep-draft *R/V Pandalus* because some of the survey stations dry up at low water. The development of a commercial management plan is not anticipated until the stock status improves.

Szarzi reported Dungeness harvest estimates from the Sport Fish permit totaled 7,700 lb for 1996, similar to the mail-out survey, and 5,100 lb for 1997; 1997 data is still preliminary and unadjusted for non-returned permits. Szarzi presented her concerns about the Dungeness stock status in Kachemak Bay to regional Sport Fish staff who wanted to see a threshold developed to determine when the fishery would reopen. The Dungeness sport/personal use fishery is currently closed until June 1 under a seasonal closure by regulation. Szarzi is researching alternatives for developing a threshold through Kruse, and Homer staff. Szarzi will receive a budget increment for FY99 and hopes to extend the pot survey into the trawlable area outside of the Homer Spit; other options include tagging during a July pot survey with an August recovery by a trawl survey with the *Pandalus* and by a pot survey. Brannian cautioned that the threshold should be  $\geq 1$  legal crab/pot because it would be difficult to justify a fishery where a large number of pots, potentially with bycatch of non-legal crab, need to be pulled to find a single, legal, retainable crab.

### *Pot clean-up*

January 1-15, being the only time each year when all commercial and recreational fishing with pots is closed inside and just outside the Homer Spit, is a good time to check for lost and illegal crab pots. The *Pandalus*, with Trowbridge and F&WP staff aboard, was involved in clean-up of lost crab post in Kachemak Bay during January 1998. Trowbridge reported collecting 32 illegal pots over 2 days of vessel work.

### Scallops

The scallop survey will occur from 31 May to 8 June and be used to set the GHL, likely to be at the BOF set maximum of 20,000 lb of meats. The survey will again focus on the primary bed with data

applied to an age-structured model, similar to the model presented at the 1997 Lowell Wakefield Symposium. That model will be submitted as a journal article.

Trowbridge hopes to field 2 observers this year to obtain better discard information. The fishery has involved a fairly small fleet, both in terms of the number of vessels and in mean vessel size compared to other Alaska scallop fisheries.

The possibility of an annual test fishery for Kamishak scallops was discussed. Revenue would cover some costs for the biennial survey and annual observer coverage, shell aging, population modeling, etc. Trowbridge will explore Line 100 pay needs for observers and survey staff.

### *Prince William Sound*

#### Trawl Shrimp

Berceli distributed a handout on the fishing harvest in the 2 PWS Districts; in 1997 the Perry Island District exceeded the GHL whereas NW District harvest was less than the GHL. Harvest rates are set at 20% of the area swept estimate. Analysis of historical data showed CPUE declined in the early 1990s, stabilized around 1994 and 1995, then declined slightly. The GHL has also dropped over time, with the GHL reduced faster than the estimated population abundance. Bue will meet with Berceli 7 April to further analyze this data and reconsider the 1998 GHL. Any changes to the 1998 GHL will be announced after the 15 April season opening. Berceli hopes to put himself or another observer aboard some trawl shrimp vessels immediately after the sablefish season closes. The News Release needs to be drafted. This is a permit fishery and fish excluders will be required beginning this year. Trowbridge would like to require a schematic drawing of the fish excluder as part of the permit process. Brannian pointed out the BOF regulation change to allow groundfish retention by non-pelagic trawl vessels will not be codified prior to the trawl shrimp season opening. Shrimp observer staffing was discussed: Gustafson will not be available and Berceli will be managing sablefish.

#### Scallops

Berceli distributed information on the Kayak Island (Area E) fishery. The BOF recently changed the season to 1 July - 15 February, and it is unclear how this change will affect fishing effort. The harvest history dates only to 1992. Only 1 vessel fished the 1997 Kayak season.

The scallop survey is scheduled for 7-16 May and will examine the area west of Kayak based on observer data, as well as the area southeast of Kayak. Bechtol will research staffing for the Kayak Island scallop survey, including PWS Science Center and University of Alaska personnel. The 1996 survey report is near completion.

## Other Issues

Berceli reported the previous source for shrimp survey pots has apparently gone out of business. A new supplier is being researched.

## GROUND FISH

Trowbridge distributed a summary of the 1998 GHIL and harvests to date and for Central Region management areas.

### *Cook Inlet*

#### Registration

Trowbridge reported the registration requirement was waived during 1992-1996, and reinstated in 1997. Some of the fleet is concerned that existing registration requirements inhibit their ability to fish multiple registration areas during a single fishing trip. Staff felt that existing requirements are needed to monitor fishing effort for species with small harvest guidelines.

#### CFEC Regulations

CFEC clarified existing regulations to require anybody making an Individual Fishing Quota (IFQ) delivery must possess an appropriate CFEC card. F&WP will begin enforcing this regulation 15 May. Previously, a vessel operator possessing a CFEC card but not IFQ shares could deliver somebody else's IFQ catch under the vessel operator's CFEC card. This complicated enforcement and responsibility for fishery landings.

#### Pacific Cod

The 1997 fishery didn't achieve the guideline. For 1998 the federal inshore season has closed. The state season reopened for jigs and pots, with pots scheduled to close by regulation 7 April and reopen 15 June. Staff discussed pot storage because of fleet concerns about having to place gear in pot storage areas during the 7-day closure period between closure of the federal season and opening of the state season. Trowbridge and Brannian will submit a BOF proposal to change the pot storage regulation wording to read "all doors secured open." Desjardin reported finding legally-stored pyramid-style pots that retained crab and fish because the pot doors had not been secured open.

Bechtol distributed summaries of the Pacific cod observer data collected from the state fishery last November. Staff intend to dockside sample jig and pot deliveries this spring. Bechtol discussed problems sampling for sex, maturity, and ages because the processors do not want fish cut open; Hilsinger suggested using test fish funds to charter a vessel. Federal observers have documented increased crab bycatch by the federal Pacific cod pot fishery in central Cook Inlet.

#### Rockfish

The Cook Inlet fishery goes to bycatch only at noon on 7 April; the current harvest of all rockfish species is 48,000 lb, with black rockfish comprising approximately 60% of the harvest, and most blacks being taken on jig gear. Exceeding of trip limits continues to be a problem. Port sampling may best be accomplished in the next week. Staff discussed the lack of prosecution of fishing violations; Homer staff will draft a memo to Hilsinger showing statistics on fishing violations that have been filed. Staff will continue to sample rockfish deliveries opportunistically. Dunne is currently on AKFIN to read otoliths and Gustin is on EVOS funds for historical data compilation. Bechtol proposed a short-term survey (e.g., 5 days) with mark-recapture efforts; an EVOS proposal is being prepared by Bechtol and Willette.

#### Sablefish

The current sablefish harvest from the North Gulf is 16,000 lb on a 72,000 lb GHL. Due to past problems with a drastic increase in effort following a fishery closure announcement, this year there will only be a 1-week window between the announcement and a closure. Staff will continue to sample opportunistically, although this fishery involves a small number of low volume deliveries, typically into Seward. Given an anticipated effort increase, the best sampling opportunity might be immediately following the announcement of a closure.

Staff had previously discussed the option of a North Gulf sablefish survey. However, it is unlikely that sale of fish caught during the survey will cover survey costs, as is done in PWS. In December 1997, Bechtol had submitted a letter to the International Pacific Halibut Commission requesting approval to sell halibut caught during the North Gulf survey to offset survey costs while collecting biological data on halibut. ADF&G's request was denied. Bechtol will work with Vansant to allocate 1-2 days of the 1998 PWS longline survey to the North Gulf, likely around Resurrection Bay, in an effort to obtain some data on relative sablefish abundance in this area.

#### Lingcod

Despite the fishery being closed until July 1, some lingcod harvests were reported as pollock trawl bycatch from PWS and the North Gulf District. Bechtol will explore placing an observer aboard a lingcod vessel once the directed fishery opens.

## Flatfish

Bechtol discussed the potential problem of bottom trawl vessels targeting flatfish in federal waters of Kamishak Bay. Lambdin will use TIX to obtain historical trawl harvest data from the Kamishak area; Bechtol and Brannian will research and develop a Cook Inlet non-pelagic trawl closure proposal for submission to the NPFMC; Brannian will contact Jane DiCosimo (NPFMC staff) regarding presenting this issue at the joint NPFMC-BOF meeting.

## *Prince William Sound*

### Pollock

The PWS pollock fishery opened at noon on 20 January; only 11 of the 24 registered vessels participated, delivering to 8 processors in Cordova, Seward, Kodiak, and Whittier. Eighty percent of the catch occurred in Port Bainbridge with some catch from southern Knight Island/Montague Strait. Sampling included on-the-grounds fishery sampling, test-fishery sampling, and acoustic survey sampling. Genetic samples were obtained from port Bainbridge, Middleton Island, and Harris Bay in the North Gulf. The harvest total was 1,820 metric tons (mt) for a 1,800 GHL. The acoustic survey occurred during 7-13 March; a trip report had previously been distributed. A large aggregation of pollock was observed for the first time this year along the mouth of Orca Bay, extending from Johnstone Point to near Bligh Island.

Staff also discussed the 4,391 mt of pollock harvested from North Gulf state waters as part of the 1997 federal total allowable catch (TAC). North Gulf deliveries were sampled at Seward by Bechtol and Trowbridge, along with Seeb and Merkouris from Genetics.

### Pacific Cod

Harvests were relatively slow for the federally managed fishery. Only 3 jig and 2 pot vessels have registered to date for the state fishery; with little effort or catch reported so far. Sampling will be opportunistic; hiring the technician would facilitate the sampling process.

### Rockfish

Total rockfish catch in 1997 was 159,000 lb on a 150,000 lb GHL. On 13 March 1998 a 10% bycatch limit was implemented in response to unexpected effort by small boats targeting yelloweye. The PWS rockfish harvest was 45,000 lb when a closure was announced, but had increased to 60,000 lb when the closure became effective. Most of the catch is destined for the whole fish market in Asia where the market is apparently strong for some rockfish species this year. Most of the PWS catch is slope and demersal rockfish; staff discussed the appropriateness of the existing GHL.

The option of test fishing to obtain rockfish age structure was discussed. The sablefish survey does capture some rockfish, primarily slope species, but might not be adequate as an index for rockfish. Staff discussed the bycatch status of rockfish during the sablefish fishery. Such a designation may promote unnecessary discards and is not biologically meaningful; the option of re-opening directed rockfish during the PWS sable fish fishery was also discussed. Although rockfish bycatch has usually been set at 20% for the PWS sablefish fishery, the 1997 ADF&G longline survey caught slightly more than 20% rockfish by weight. Lambdin will research bycatch in the longline survey and in historical unrestricted sablefish fisheries. Berceli will write an EO to establish rockfish bycatch for the PWS sablefish fishery at 20%, or a value deemed appropriate after reviewing Lambdin's research results. The bulk of PWS rockfish sampling occurs opportunistically during dockside sampling of the directed sablefish fishing, the longline surveys, and trawl surveys. Bechtol mentioned the EVOS proposal to assess nearshore rockfish species, focusing on the southern portion of PWS adjacent to the Gulf of Alaska.

### Sablefish

Berceli distributed data on the PWS sablefish fishery. CFEC has issued 29 limited entry permits; 60 permits are pending, 8 are waiting hearings, and 3 have been denied but can appeal. Berceli proposed a 36 h opening for the 1998 fishery. Hilsinger suggested examining annual fishery catches as lb/vessel/h in an effort to determine what fishery duration to allow. Last year the Russian fleet did not fish due to a religious holiday. Additional effort might be expected in 1998 because the fishery opening does not overlap a holiday and a longer first opening might attract additional participants. Staff discussed that the GHL is usually presented as a midpoint in a guideline harvest range, and the prime objective should be to not exceed the upper end of the guideline range. Berceli will contact F&WP regarding setting the 1998 season for 36 h to open at 1800 hours ADT on 1 May, closing at 0600 hours on 3 May. Berceli will also contact F&WP, and Hilsinger will contact Clasby, regarding requiring a pre-fishery tank inspection. In addition to season opening and closing dates and times, the permit will mention the probability of pre-season spot checks of holds and 48 h landing requirements. The pre-season closure will apply to longline gear for 48 h beginning at 1800 hours on 29 April and for 24 h beginning at 0600 hours on 3 May. Fishery sampling will occur at Cordova, Whittier, and Seward.

The sablefish survey is scheduled for 31 August to 25 September and will examine northwest PWS and eastern PWS, with a few days allocated to the North Gulf. The 1996 survey focused on the northwest and the 1997 survey assessed the northwest and the southwest. Tagging was discussed. Bechtol will research the number of sablefish tags to be released to estimate the population with reasonable confidence.

### Sharks

Bechtol discussed several grant proposals to examine salmon sharks in PWS. An EVOS proposal from NMFS would examine salmon shark diet. A second suite of proposals, involving Ken Goldman and Jack Musick, VIMS, will explore stock structure and migratory patterns. The VIMS proposals include applications to EVOS, Saltonstall-Kennedy, National Science Foundation, etc. Bechtol and Vincent-

Lang, are listed as cooperating investigators on both the NMFS proposal and several of Goldman's proposals. Bechtol does not anticipate a significant time commitment if these proposals are accepted. Some fieldwork is an option, but NMFS or VIMS staff will conduct the bulk of the analysis and writing. Goldman collected a number of sharks in PWS during 1997.

## MARICULTURE

### *Live Fish Transport*

Piorkowski described an ADF&G headquarters subcommittee (Ted Meyers, P. Larson, G. Museth, H. Savikko, S. McGee, K. Messing, and B. Piorkowski) formed to examine the issue of live fish transport from aspects of disease transport, holding and inspection requirements, etc. All species are of interest including crab, salmon, geoducks, clams, rockfish, and urchins. Rockfish in the 2-3 lb size range are highly marketable in Seattle. Live products are desirable for the Asian market, often tripling in product value. A major concern with transporting of live product is the release or escape of non-indigenous species (NIS), such as green crab that can kill and eat significantly larger indigenous crab species. The distribution of green crab is currently expanding northward past Vancouver, B.C. Piorkowski hopes HQ will develop a staff position for NIS.

The Board currently regulates the take, but not the transport, of commercially taken products. Berceli discussed a Pacific cod holding operation being proposed by a PWS permit holder. Piorkowski explained that if fish are fed, it is defined as fish farming. Brannian will contact Larson regarding any proposals that are being developed to regulate live fish transport. Piorkowski discussed transportation mediums, e.g., newspaper versus non-indigenous macroalgae, and requirement listed in spat transfer permits for mariculture operations. The transport of NIS in ballast tanks of tankers and chip ships was also discussed. Trowbridge will contact Hillstrand regarding the potential transport of NIS in chip ship ballast tanks. Smithsonian, RCAC, Sea Grant, USF&WS are currently involved in baseline studies examining introductions of NIS into Valdez Arm through ballast tank water. Piorkowski is developing a plan to address NIS issues; the draft plan will next be delivered to Larson. Piorkowski also hopes to develop an education program involving NIS monitoring by schools. Currently there is only \$2 million nationwide allocated to NIS research, perhaps expanding to \$20 million in the future.

### *Aquatic Farming*

On 9 April, the House Resources Committee will meet with mariculture industry representatives to discuss complaints that ADF&G is inhibiting mariculture production; Piorkowski, DNR, Duffy, Bruce, etc., are invited. A policy is needed on defining the standing stock or sustained production required for littleneck or goeduck clam leases. The standing stock should only be allocated if it is not fully utilized, in which case it could be allocated to aquatic farm leases. Clarification is needed on the allocative

aspects of leased beaches; recreational harvesting on a leased beach is not allowed because the DNR permit allows sole access to a fixed resource.

Actual clam harvesting requires DEC certification, including 30 water samples at high and low tides, pre-harvest sampling for PSP/domoic acid, and PSP/domoic acid sampling of each market batch. ADF&G has not determined whether a merged lease-public access policy can work. The permit application process is now finalized; permit applications will be accepted 1 Jan-30 April on alternate years beginning in 1999. Applications will be submitted to ADF&G, DNR, DEC, and DGC (Department of Governmental Coordination). Applications will be reviewed for adequate information, and a finding issued to the public and all agencies in the fall. The comment period lasts 30-45 days, and may be extended to include public hearings if  $\geq 5$  people write to protest the applications. Comments can typically be categorized as either reasonable, neurotic, or NIMBY (not in my backyard). Pritchard (DNR) and Piorkowski will then make cooperative recommendations on permit issuance. The DNR permit is for 10 years but the duration of ADF&G permits has yet to be determined. Alaska farmers will pay an annual fee of approximately \$600/acre/yr to maintain their sites and permits. Piorkowski noted this payment is almost an order of magnitude greater than paid by mariculturists in other areas of the U.S. New permit renewal requirements will include a minimum annual production of \$3,000/acre or \$15,000/farm. As well, in order to prevent misuse of the mariculture process to obtain private land leases for recreational purposes, farmers will not be allowed to live on site unless they own the adjacent land. Across the U.S., 80-90% of the shellfish mariculture production is from small farms. Existing mariculture regulations are found in 5 AAC 41.220.

A mariculture spat permit only requires approval from ADF&GT Pathology (T. Meyers) and the Piorkowski. Certified spat are limited to being  $< 20$  mm to decrease the likelihood of accidentally transporting *Macoma*. Some hatcheries are interested in being mariculture nurseries that receive and grow spat to an outplanting size that is sold to farmers. For example, Qatecak Hatchery in Seward recently applied for a shellfish transport permit to receive geoduck spat from SE for culturing into broodstock and ultimately production of spat for outplanting in SE. The hatchery will use a water circulation system that involves ozonization of any water released back into Resurrection Bay. Maricultured species are assessed for concerns of genetics, such as potential interbreeding with local stocks, and pathology, such as cultured species carrying pathogens. Staff expressed concerns about limited oversight of species that might not present genetic or pathological issues, but might present ecological problems such as competition with indigenous resources. Staff suggested that future options should include a regional planning team to review mariculture production plans and operations.

Under the Bolt II decision in Washington state, indigenous peoples have been allocated 50% of any shellfish on beaches, regardless of whether the shellfish are cultured or not. In some cases mariculture sites have been in families for 2-3 generations. To avoid having cultured product removed under the Bolt II decision, some culturists may migrate from Washington to Alaska.

## VESSELS

### *Montague*

Vansant cautioned that the draft *R/V Montague* schedule includes days allocated to gear loading and unloading at the harbor, so the scheduled days are greater than the sailing days used for budgeting. Trowbridge discussed the option of a 36 h PWS sablefish opening. Some of the fleet had asked for the *Montague* to appear earlier on the grounds for tank inspections. The option of opening the fishery at an earlier time, particularly for the second opening, was discussed. Hilsinger felt we could open later but not earlier than the opening time and date listed in the regulation book because an emergency opening does not exist for an earlier opening. Sablefish tank inspections will start 30 April.

The outer Kenai longline survey was removed from the July schedule. However, we may try to expand the PWS survey by a few days to allow some survey sets along the outer Kenai. There are usually two Copper River Dungeness surveys for the *Montague*, but this is being reduced to a single August survey.

### *Pandalus*

Desjardin distributed an updated schedule showing 73 sailing days without Joyce's project. Staff reviewed the proposed survey/sailing schedule; B. Harris will be available around 6 May and be off the boat 10 August.

Desjardin cautioned staff to remain cognizant of the number of biologists aboard the *Pandalus* during day trips. The capacity of the life raft on the *Pandalus* is only rated for 8 people. Administration staff have expressed interest in participating in a day trip to observe the vessel gear. Bechtol will draft and distribute a table of survey staffing to identify survey needs and Brannian will work with Administrative staff to arrange trips.

## MISCELLANEOUS

### *Administration*

Brannian distributed current yellowbook sheets; Hilsinger distributed FY99 requests that the legislature will be reviewing. The legislature is projecting a budget cut this year. Hilsinger explained some of the options Director Clasby might consider in allocating any budget cuts made by the legislature.

## *Personnel*

### Cordova Technician

Berceli hopes to have the Cordova Fish Tech III position hired for 2 months of work beginning with the sablefish fishery. The position was initially designed to work June-October, but fishery and survey needs have changed somewhat. This field season's responsibilities include sablefish, sidestripe shrimp, and scallops in May, gear work and data entry and processing in June; Dungeness in August; sablefish in September; and spot shrimp in October. After updating the PD, Berceli will contact Beckie Oliva to obtain the FT III transfer list.

### Seward Sampler

Trowbridge and Bechtol have not yet drafted a PD for the sampler position, although Trowbridge did contact Oliva regarding this type of position. This Seward sampler is envisioned as a non-perm, part-time position that could provide periodic dockside sampling support. The individual would need to be highly independent; funding would be multiple-source. Because of the part-time aspect, this would likely involve a Seward local hire.

### AKFIN Funding

By the end of next week, Bechtol and Trowbridge will provide Brannian with a description of all existing and proposed spending under AKFIN; a detailed plan is needed for the \$12,700 available for the remainder of this fiscal year. A preliminary spending plan is also needed for the \$126,000 available for FY 99, keeping in mind that this includes Lambdin's funding. Bechtol clarified that Dunne is currently reading otoliths under AKFIN funding, but the funding is allocated through the HQ age lab and not to Region II. New AKFIN funding will be made available in the new fiscal, although much of that is allocated to equipment purchases. Funding in addition to the \$126,000 will also be available for a programmer located in and dedicated to Central Region.

## *Board of Fisheries Proposals*

### Groundfish

#### *Rockfish Management Plan*

Staff discussed the definition of allowable bycatch and how to describe legally retainable bycatch relative to a directed fishery. After substantial discussion, staff will change the proposed regulatory language to specify using a bycatch limit as established under 5 AAC28.070.

### *Rockfish Season*

The proposed language redefines the directed rockfish fishery to occur from 1 July to 31 December, concurrent with the open lingcod season. Staff feel that only 40,000 lb could be allocated to the directed fishery. Problems include high rockfish mortality during the directed fisheries, particularly lingcod. Because of the allocative nature of the proposed change, the BOF needs to discuss setting of the directed fishery limit for rockfish, and how to handle other fisheries that cause rockfish bycatch. Some options include directed rockfish season changes, directed rockfish allocations, gear allocations, and amending regulations for non-rockfish fisheries such as lingcod, Pacific cod, etc. Proposal language should also reference 5 AAC 28.365. Another consideration is that the black rockfish spawning season is very protracted and likely occurs during the summer. Rockfish bycatch in the existing lingcod fishery is so high that a rockfish bycatch limit likely results in undocumented rockfish mortality. Trowbridge and Brannian will modify the proposal to accommodate some of the above issues. Under WHO IS LIKELY TO BENEFIT/SUFFER, staff need to identify that this proposal is highly allocative depending upon decisions made by the BOF. As a result of these concerns, Trowbridge and Brannian will also develop a lingcod management plan. Bechtol will prepare a summary of rockfish biology for the BOF meeting.

### *Permits for Miscellaneous Groundfish*

Southeast Alaska currently uses a miscellaneous groundfish permit. Miscellaneous groundfish in Central Region are now managed to be concurrent with the federal seasons and only require the appropriate CFEC card and an area registration. Staff will modify the proposed permit to provide more management flexibility, similar to the PWS pollock permit.

### *Lingcod and Rockfish Subsistence*

Staff suggested setting the hook limit to the same as for halibut subsistence fishing to prevent circumvention of the halibut gear limits for subsistence. Staff suggested that for enforcement purposes, subsistence gear and possession limits should also be the same as for recreational regulations. J. Fall (Subsistence Div.) is not against requiring a subsistence permit for southern Cook Inlet subsistence fishing in areas external to the southern Kenai Peninsula village residents. The proposed regulation will be modified to specify handtroll or longline with a maximum of two hooks.

### Shellfish

#### *Tanner Crab Harvest Strategy*

Prior the fall Board meetings Trowbridge and Bechtol will draft a preliminary strategy for a future Tanner crab fisheries in Cook Inlet. Aspects will include a biological season, temperature-dependent fishery openings, and thresholds for opening. Recreational harvests and the anticipated fleet size should also be considered. Hilsinger suggested 1 November to 31 March would be the appropriate window to avoid mating and molting. Trowbridge will contact Kimker to determine why a cold temperature provision wasn't previously adopted for areas external to the Southern District.

#### *PWS PU Tanner Crab Fishery*

Trowbridge discussed the proposal to place the PWS commercial Tanner closure in regulation until the stock rebuilds and a management plan is brought to the Board. Staff were not in concurrence as to

whether personal use (PU) Tanner crab fishing should be allowed to continue in areas of PWS not currently closed to all trawl and commercial pot gear. Arguments against a PU closure were that existing harvests are minor and provide a coarse index of stock status; arguments favoring closure were that PWS does not have any harvestable surplus. One option is to propose closing all of PWS under "OTHER SOLUTIONS CONSIDERED" to list "Allow opening of specific areas."

#### *Fish Reserves*

Sport Fish Division has proposed permanent regulatory closures around marine mammal reserves. Because these closures are currently closed by EO in concurrence with NMFS closure for marine mammal protection, this is largely a housekeeping proposal, but would introduce the concept of fishing reserves to the Board and public. Bechtol commented that existing closures address vessel transiting, but the proposed closure language only appears to address fishing activities; Bechtol will contact Meyer regarding vessel transiting regulations.

#### *Database and Mapping*

The database workshop in Girdwood was well received. Bechtol has copies of the Access training videos. Baker sent the NOAA raster charts to the Homer network. Given the interest in mapping capabilities, Trowbridge will contact Gail Smith regarding a MapInfo training class for the Homer office.

Table 1. Action items assigned at the Central Region shellfish/groundfish staff meeting in Homer, 31 March - 2 April 1998.

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1. Bue will contact Baker regarding participation on one of the Kachemak Bay clam surveys.
  2. Prior to the next BOF meeting when clams are addressed, staff will research the implications of freezing temperatures on clams.
  3. For the 1999 staff meeting, Szarzi will try to prepare a summary of recreational clam effort to identify areas of significant user group overlap.
  4. Bechtol will prepare a list of the survey dates and also a list of the potential staffing for each survey; Bechtol will research staffing for the scallop survey.
  5. Brannian will explore Line 100 pay needs for observers and survey staff during scallop management and assessment.
  6. Trowbridge will have the AMR available prior to participating in the scallop survey.
  7. Trowbridge and Brannian will submit a BOF proposal to change the pot storage regulation wording to read "all doors secured open."
  8. Homer staff will draft a memo to Hilsinger showing statistics on fishing violations filed.
  9. Bechtol will work with Vansant to allocate 1-2 days of the 1998 PWS longline survey to the North Gulf, likely around Resurrection Bay, in an effort to obtain some data on relative sablefish abundance in this area.
  10. Bechtol will explore placing an observer aboard a lingcod vessel once the directed lingcod fishery opens.
  11. Lambdin will use TIX to obtain historical trawl harvest data of groundfish for the Kamishak area; Bechtol and Brannian will research and develop a Cook Inlet non-pelagic trawl closure proposal for submission to the NPFMC.
  12. Berceli will write an EO to establish the rockfish bycatch at 20% for the PWS sablefish fishery.
  13. Lambdin will research rockfish bycatch in the longline survey and in previous, unrestricted sablefish fisheries. Berceli will write an EO to establish the rockfish bycatch at 20%, or an appropriate value, for the PWS sablefish fishery.
  14. Berceli will contact F&WP regarding setting the 1998 season for 36 hours, opening at 1800 hrs on 1 May and closing at 0600 hrs on 3 May.
  15. Brannian will contact Larson regarding any proposals that are being developed to regulate live fish transport.
  16. Brannian will work with Administrative staff to arrange for day trips aboard the *Pandalus* during Kachemak Bay trawl surveys.
  17. Bechtol and Trowbridge will provide Brannian with a detailed spending plan for the remainder of our AKFIN funds FY 98.
  18. Trowbridge and Brannian will modify the rockfish season proposal to accommodate some of the above issues; Trowbridge and Brannian will also develop a lingcod management plan; Bechtol will prepare a summary of rockfish biology for the BOF meeting.
  19. Staff will modify the proposed permit for miscellaneous groundfish to provide more management flexibility similar to what exists in the PWS pollock permit requirement.
  20. Staff will propose changes to groundfish subsistence regulations to specify a maximum of two hooks and only hand troll and longline gears.
  21. Trowbridge and Bechtol will draft a Cook Inlet Tanner Crab Harvest strategy prior the fall meetings.
  22. Trowbridge will contact Hillstrand regarding the potential transport of non-indigenous species in chip ship ballast tanks.
-

Table 2. Individuals who participated in all or a portion of the Central Region shellfish/groundfish staff meeting, 31 March - 2 April 1998.

Bill Bechtol (recorder)	Bob Berceli	Linda Brannian
Brian Bue	Paul Desjardin	Steve Fried
Rich Gustafson	John Hilsinger	Mo Lambdin
Scott Meyer	Bob Piorkowski	Ellen Simpson
Nicky Szarzi	Charlie Trowbridge	Jim Vansant

Table 3. Summary of tentative annual vessel use for the Pandalus and the Montague.

Days	<u>Pandalus</u> Trip	Days	<u>Montague</u> Trip
<u>General Fund Sailing Schedule</u>			
14	Kamishak Herring	10	Pollock Management
14	Kayak Scallops	7	PWS Herring Acoustics
10	Kamishak Scallops	20	Herring Management
8	Kamishak Crab	6	Sablefish/Shrimp Management
9	Kachemak Crab	10	Marker Maintenance
3	Kachemak Pot Enforcement	5	Coghill/Eshamy Freight/Mgt
58	Total	12	SW Pink
		5	Copper River Dungeness
<u>Alternate Year Substitutes for Above</u>			
17	PWS Tanner Crab	10	Orca Inlet Dungeness
7	Kachemak Shrimp	3	Spot Shrimp
		3	Bait Herring Management
		90	Total
<u>Other Funding Sources</u>			
21	USGS Bird Forage - RSA	10	Fry Seine - RSA
19	UAJ Bird Forage - RSA	20	Sablefish Survey - Test Fish
6	GLOBEC - RSA	5	Deer Pellets - RSA
<u>Other Options</u>			
5	Outer/Eastern Shrimp	7	Outer Kenai Sablefish
10	Outer/Eastern Rockfish		
14	PWS King Crab		

SHELLFISH-GROUNDFISH  
SPRING STAFF MEETING AGENDA  
March 31 – April 2  
Meeting begins @ 11:30 hours.

**I. INTRODUCTION**

- A. Meeting Overview
- B. Agenda Changes

**II. SHELLFISH**

A. Cook Inlet

- 1. Clams
  - a. Assessment (Bechtol)
  - b. 1998 management (Trowbridge)
- 2. Dungeness
  - a. Sport/personal use discussion (Szarzi)
  - b. Assessment (Trowbridge/Szarzi)
- 3. Pot clean-up report (Trowbridge)
- 4. Scallops
  - a. Management
  - b. Assessment (Bechtol)
  - c. possible test fish?

B. Prince William Sound

- 1. Trawl Shrimp (Berceli)
  - a. Management
  - b. Sampling
- 2. Scallops
  - a. Management (Berceli)
  - b. Assessment (Bechtol)
  - c. possible test fish?

### III. GROUND FISH

#### A. Cook Inlet

1. Registration
  - a. New CFEC Regs
2. Pacific Cod (Trowbridge)
  - a. Federal Season Summary
  - b. State Season Status
  - c. Assessment
3. Rockfish
  - a. Fishery Status (Trowbridge)
  - b. Sampling (Bechtol)
4. Sablefish
  - a. Fishery Status (Trowbridge)
  - b. Sampling and Survey (Bechtol)
5. Lingcod
  - a. Fishery Status (Trowbridge)
  - b. Sampling (Bechtol)
  - c. Observer Trip
6. Flatfish

#### B. Prince William Sound

1. Pollock
  - a. Fishery Summary (Berceli)
  - b. Sampling (Bechtol)
  - c. Accoustic survey
  - d. Test fishery
2. Pacific Cod
  - a. Federal season summary (Trowbridge)
  - b. State status (Trowbridge/Berceli)
3. Rockfish
  - a. Fishery Status (Trowbridge)
  - b. Assessment (EVOS project etc.) (Bechtol)
  - c. Sampling
4. Sablefish
  - a. Management (Berceli)
  - b. Preseason closure period?
  - c. Enforcement

5. Sharks

#### IV. MISCELLANEOUS

1. Mariculture (Piorkowski)
  - a. leasing/permitting review path
  - b. live fish transport
2. Vessel Schedule
  - a. Survey participation (Bechtol)
3. Personnel
  - a. PWS technician (Berceli)
  - b. Seward sampler (Trowbridge)
  - c. AKFIN vision and funding discussion
4. BOF Preparation
  - a. Research needs (who, when, how?)
  - b. Proposals (Trowbridge/Brannian)
5. Database & Mapping discussion

Notes for PWS Sablefish Fishery.

CFEC Sablefish Permit Info as of 3/20.

Permits Issued	29
Interim pending	60
Hearing/Decision	8
Denied	3
	<hr/>
	100

PWS Sablefish Effort and Harvest

Year	Vessels	Landings	Pounds	LBS/Landing	Fishing Period Hrs
1990	70	257	213,974	833	
1991	72	147	331,314	2,254	
1992	54	119	438,301	3,683	
1993	55	87	313,976	3,609	48
1994	55	92	279,292	3,036	48
1995	124	135	574,195	4,253	48
1996	65	68	251,394	3,697	24
1997	53	91	208,371	2,290	36
Average	68.5	124.5	326,352	2,957	41

*H Fishery  
Periods*

GHL 242,000

Question centers about how many vessels will participate in this years fishery, and then to decide duration of the fishing period.

1997, Last year did not attain GHL in two fishing periods, the first 24hrs in duration and initial harvest of approximately 137,000 lbs, the second 12 hrs in duration and a harvest of 71, 370 lbs. Therefore, 33,600 lbs were remained. Is the stock strong enough to sustain GHL???

1996, GHL 275,000 lbs. 251,400lbs harvested, 23,600lbs remained.

Received a number of calls and visits from fishermen, no one liked having two openings. As 24hr opening seems too short and 48 perhaps too long, a 36 hr opening seem appropriate.

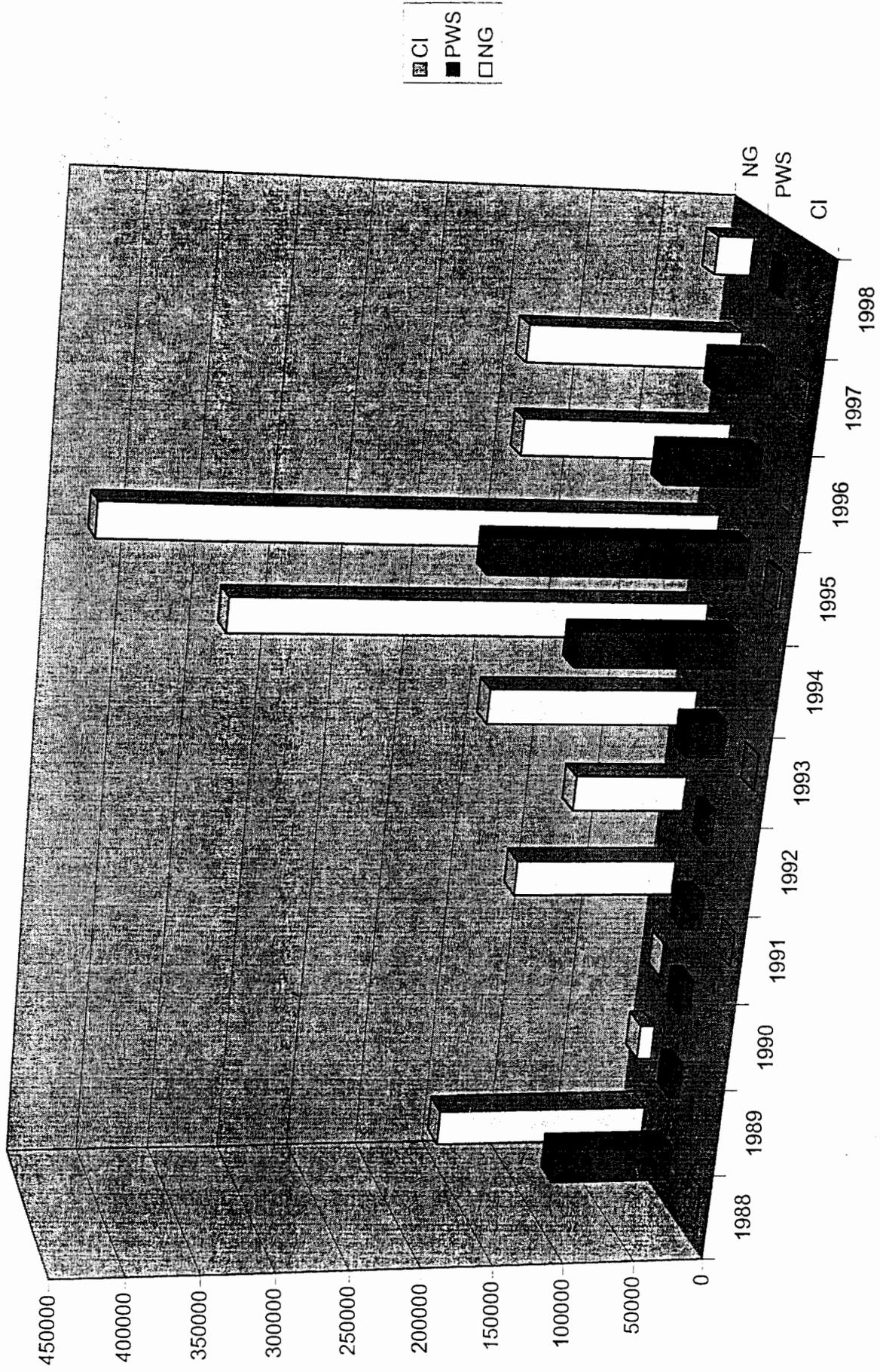
Will halibut landing slow down rate of sable fish landings?? 46 Fishermen who are eligible to participate in 1998 PWS sablefish fishery, held halibut permits in 1997.

If GHL is not attained, at what harvest level do we decide to have a second opening vs.close the fishery?

Preparations:

- Draft of news release to announce the fishery & Groundfish closure, complete.
- Draft of Registration Permit, complete.
- Draft of Sablefish Longline Log, complete
- Draft of Interview form - will complement log - Open to suggestions

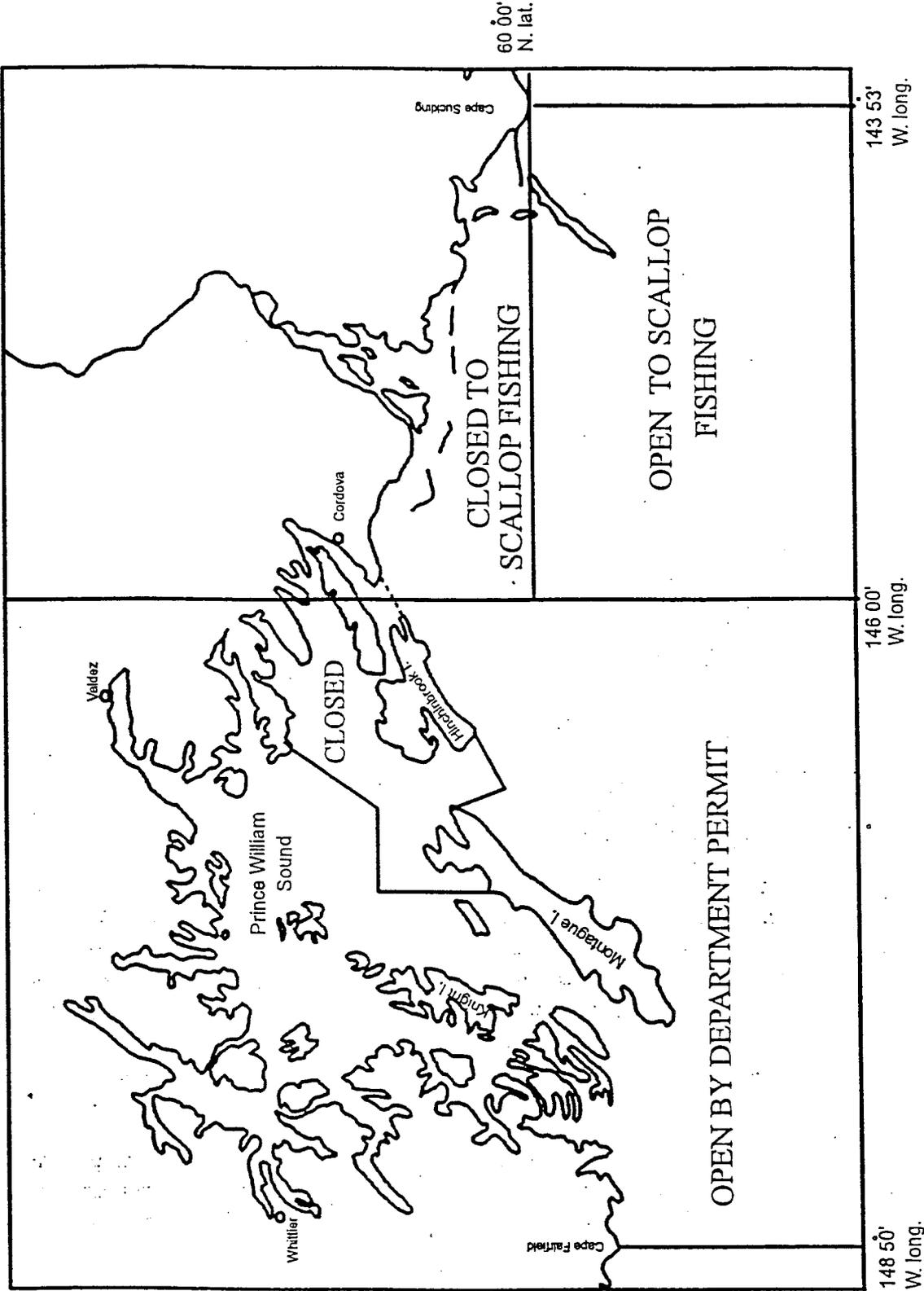
# Black rockfish (Federal and State waters)



**Table 1. Results from the ADF&G Pacific littleneck clam surveys in DEC certified areas of Kachemak Bay, 1990 to 1997.**

Location Year	Number of locations sampled	Total number of quadrats dug in all locations	Relative density clams / square meter			Population Abundance			Average shell length (mm.)		Average weight (grams)		Population Biomass pounds of clams /d		
			Legal	Sublegal	Total	Legal	Sublegal	Total	Legal	Sublegal	Legal	Sublegal	Total		
(million clams)															
Chugachik															
1992	1	12	67.2	50.4	117.6	4.1	3.1	7.2	47	30.5	27.5	7.6	249,929	51,576	301,505
1993	1	16	41.0	48.8	89.8	2.5	3	5.5	46.8	31.4	30	9.4	165,951	61,827	227,778
1994	1	33	36.4	42.8	79.2	2.2	2.8	4.8	46.2	31.1	26.8	8.4	131,485	48,630	180,115
1995	1	35	33.8	19.4	53.2	2.0	1.2	3.2	47.2	30.4	27.6	8.2	125,971	21,495	147,466
1996	1	33	63.3	25.0	88.3	3.9	1.5	5.4	46.4	31.8	26.4	8.8	225,713	29,613	255,326
1997	1	40	60.2	22.4	82.6	3.7	1.4	5.1	45.8	31.2	24.2	8.0	196,558	24,178	220,736
(Numbers of clams from one beach only)															
Bear Cove (closed)															
1995 (live)	1	6	75.3	69.3	144.6	76,087	70,027	146,114	43.1	30.5	20.2	7.6	3,385	1,172	4,557
(dead)			10.0	11.3	21.3										
(Numbers of clams from one beach only)															
Bear Island (open)															
1995 (live)	1	6	80.0	68.7	148.7	65,760	56,444	122,204	44.6	31.4	22	8.9	3,187	1,110	4,297
(dead)			26.0	16.7	42.7										
1996	1	5	53.6	70.4	124.0										
(million clams)															
Jakolof															
1992	6	42	22.1	2.2	24.3	1.6	0.2	1.8	48.5	32.1	34.1	10.1	110,025	4,358	114,383
1993	11	53	26.2	10.4	36.6	1.8	1	2.8	47.1	29.1	28.9	7.2	108,227	15,831	124,058
(Pop. biomass from one beach only)															
Tutka															
1990 <sup>a</sup> (3 transects)	1	24	24.8	36.8	61.6				46.1	26.1	25.1	5.8			
1992	8	39	16.8	2	18.8				46.9	35.6	29.1	12.9			
1993	4	22	13.6	4.8	18.4				47.4	29.4	28.4	6.8			
(Numbers of clams from one beach only)															
Halibut Cove (Ismailof Island one beach)															
1994	1	8	77.6	96.4	174.0	144,383	179,780	324,163	44.2	31.8	22.7	8.8	7,219	3,485	10,704
1996 moderate digging	1	9	92.4	80.4	172.8	120,178	104,578	224,756	42.1	32.6	18.1	8.9			
1996 heavy digging	1	7	120.0	52.6	172.6	67,560	29,598	97,158	43.9	32.6	19.3	8.8			
1996 Total	1	16	104.5	68.3	172.8	187,738	134,175	321,913	42.7	32.6	18.5	8.7	7,659	2,621	10,280
1997	1	32	59.5	18.5	78.0	94,486	29,378	123,864	44.2	31.8	20.8	8.4	4,329	544	4,873
(million clams)															
Sadie Cove (west side)															
1993	2	17	27.6	35.2	62.8	1.6	2.2	4.0	43.9	31.3	24.5	9.1	95,506	44,793	140,299
1994 <sup>b</sup>	4	24	35.2	27.6	62.8	2.2	1.8	4.0	45.2	30.6	27.5	9.1	135,467	35,190	170,657
1995 <sup>c</sup>	4	27	36.9	16.4	53.3	2.4	1.0	3.4	45.8	28.5	27.8	7.9	143,983	18,240	162,223
1996	4	58	26.4	21.0	47.4	3.0	3.0	6.0	46.4	29.4	29.2	8.4	153,151	35,085	188,236
(east side)															
1997	6	99	23.0	24.7	47.7	3.2	3.3	6.5	43.6	29.2	22.7	7.5	157,827	55,994	213,821

<sup>a</sup> The 1990 Tutka survey substrate was washed through small screens. The methodology was different than the 1992-94 surveys. The legal component may be comparable.  
<sup>b</sup> In 1994 2 sites were the same as in 1993 and 2 were different.  
<sup>c</sup> The 1995 sites were different from previous years.  
<sup>d</sup> 1lb = 0.454 kg



Waters open to scallop fishing beginning January 10, 1997.

NOTE: this map is only a graphical representation, contact the department or consult 1996-97 shellfish regulations for actual coordinates.

## Review of the Area E Weathervane Scallop Fishery.

The fishing season for scallops in Registration Area E is from July 1 through February 15 unless otherwise closed by emergency order.

The opening date of the PWS area is July 1<sup>st</sup> and this is concurrent with that in the Yakutat, Kodiak, Alaska Peninsula and Westward registration areas.

By regulation, there is an area vessel registration, and a mandatory observer requirement.

There are two designated scallop harvest areas within Area E. The traditional area in the proximity of Kayak Island from Cape Suckling to 146 degrees W. long, and an exploratory area west of 146 degrees W. long to Cape Fairfield. There are closed water restrictions within these areas.

In addition, there are bycatch limits of 500&130 tanner crab for each of these areas respectively. The fishery will close when the projected harvest indicates that GHLL, or the bycatch limit is reached.

Documented harvests of scallops in the PWS area date to 1992. The following table illustrates the brief history of this fishery.

Area E Weathervane Scallop Fishery

Year	Number of Vessels	Harvest Meat LBS	GHLL	Season Hours	Comments
1992	4	208,836			Federal Waters
1993	7	63,068	50,000	67	
1994	Rescheduled to 1995				
1995			50,000	390	Plus additional 60,000lbs
1996	Closed due to illegal harvest				
1997				141	Illegal harvest.

Bill and Charlie are scheduled to conduct the Kayak Is. Scallop assessment survey starting the first week of May. Will provide GHLL for the 1998 season.

### Preparations.

To Do:

Review Scallop Observers Manual.

Coordinate with Jeff Barnhart regarding observer kits, briefing and debriefing requirements and procedures.

Write up News Release and Registration Permit.

## PWS Side Stripe Trawl Shrimp Fishery.

The PWS Management Area is divided into two shrimp trawl fishing areas, the Northwest Shrimp Trawl Fishing District and the central/southwest areas.

Harvest levels for the 1997 season were set equal to the 1995 final harvest guideline. This amounts to 67,200 lbs for NW Shrimp Trawl Fishing District which is further divided, 48,000lbs for the PortWells/Wells passage portion, and 18,500lbs for the remainder. The guideline harvest level for the Central and South west areas was established at 33,000lbs.

Harvests by Specific areas :

### NWD Port Wells & Wells Passage

20300 Total	264.75	14,857
20303 Total	433.35	20,949
Area Total	698.1	35,806
	GHL	48,700
	Difference	12,894
Perry Is		
20304 Total	644.3	23,804
	GHL	18,500
	Difference	-5,304

Total NWD  
Harvest 59,610

### Central Area Harvest

20305 Total	279	18,297
20302	5	191
	284	18,488

### SW Area

20100 Total	304.4	9,031
20101 Total	62.1	2,648
20102 New Wave	18	858
	385	12,537

Central & SW  
Total 31,025

Entire Area 90,635

# COMMERCIAL FISHERIES NEWS RELEASE

ALASKA DEPARTMENT OF FISH & GAME

STATE OF ALASKA  
Department of Fish and Game  
Frank Rue, Commissioner

Southeast Regional Office  
P.O. Box 240020  
Douglas, Alaska 99824

Robert C. Clasby  
Director

Contact: Tory O'Connell  
(907) 747-6688

FOR IMMEDIATE RELEASE

March 19, 1998

## NEW CFEC REQUIREMENTS FOR IFQ HOLDERS

Sitka . . . The Alaska Department of Fish and Game today announced the following information concerning new CFEC requirements for IFQ holders:

As of January 18, 1998 the Commercial Fishery Entry Commission (CFEC) requires that all persons reporting landings of fish under a federal individual fishing quota (IFQ) must hold an individual CFEC permit card for that fishery and report their landings on that permit card. Prior to 1998, IFQ holders were legally allowed to land fish on another permit card. For example, fishermen working on the same vessel could all hold IFQ but they could all land that fish under one permit card as long as their individual IFQ accounts were debited. The new CFEC regulation prohibits this practice and therefore anyone selling IFQ must file a fish ticket imprinted with their permit card. Nothing in this regulation changes the current federal reporting procedures for IFQ deliveries.

The new CFEC regulation reads as follows:

20 AAC 05.110. PERMIT REQUIRED TO POSSESS FISH OR SHELLFISH. (a) It is unlawful for any person to possess, within waters subject to the jurisdiction of the state, any fish or shellfish unless the person has in his possession a valid interim-use or entry permit card allowing him to take the fish or shellfish in his possession with the gear with which the vessel is equipped unless waived by the commission for good cause.

(b) As used in this section, a "commercial purpose" includes any sale, purchase, trade, gift, or any portion of a commercial transaction.

(c) For purposes of this section, a person reporting a landing of fish under a federal individual fishing quota (IFQ) possesses fish for a commercial purpose.

Phone numbers for the Southeast Area Offices are Juneau 465-4250, Sitka 747-6688, Ketchikan 225-5195, Petersburg 772-3801, Wrangell 874-3822, Haines 766-2830, and Yakutat 784-3255.

**Kachemak Bay Pacific Cod Observer Data - November 1997**

Pot Gear	Date							Grand Total	Percent Abundance
	11/7	11/11	11/13	11/18	11/19	11/22	11/24		
	Catch Abundance (number of animals)								
Pacific cod	179	318	392	394	339	325	286	2233	68.6%
Arrowtooth	0	122	2	1	2	2	3	132	4.1%
Butter Sole	0	1	0	0	0	0	1	2	0.1%
Black Rk	0	1	0	0	0	0	0	1	0.0%
Dusky Rk	0	0	0	3	0	2	1	6	0.2%
Sculpin	22	14	32	26	9	14	13	130	4.0%
Halibut	5	6	19	14	7	8	11	70	2.2%
Pollock	1	0	0	0	1	0	0	2	0.1%
Sablefish	0	1	0	0	0	0	0	1	0.0%
Octopus	7	6	1	7	4	16	3	44	1.4%
Snails	0	56	17	71	15	47	3	209	6.4%
Sea Urchin	0	19	36	75	38	13	17	198	6.1%
Tanner	0	7	0	2	29	4	5	47	1.4%
Decor. Crab	0	68	8	7	14	7	26	130	4.0%
Starfish	8	6	3	9	9	7	7	49	1.5%
Sand Dollar	0	0	0	1	0	0	0	1	0.0%
<b>Total</b>	<b>222</b>	<b>625</b>	<b>510</b>	<b>610</b>	<b>467</b>	<b>445</b>	<b>376</b>	<b>3255</b>	<b>100.0%</b>

**Kachemak Bay Pacific Cod Observer Data - November 1997**

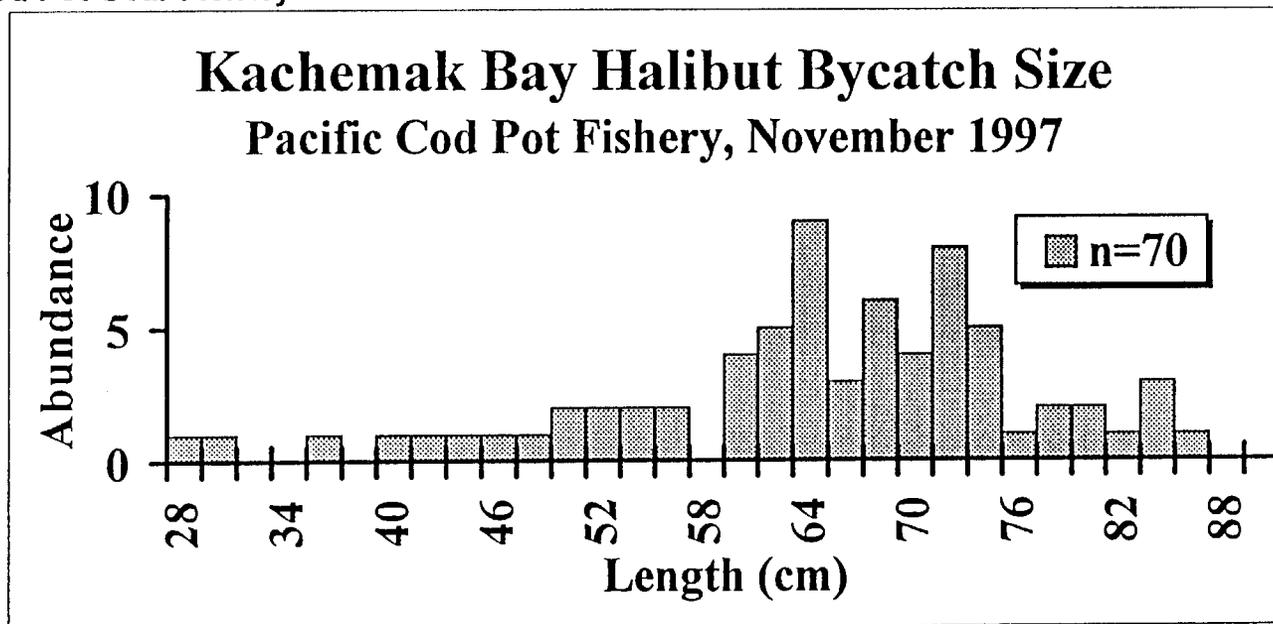
Pot Gear	Date							Total Abundance	Percent Abundance
	11/7	11/11	11/13	11/18	11/19	11/22	11/24		
	Percent Composition								
Pacific cod	80.6%	50.9%	76.9%	64.6%	72.6%	73.0%	76.1%	2233	68.6%
Arrowtooth	0.0%	19.5%	0.4%	0.2%	0.4%	0.4%	0.8%	132	4.1%
Butter Sole	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.3%	2	0.1%
Black Rk	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1	0.0%
Dusky Rk	0.0%	0.0%	0.0%	0.5%	0.0%	0.4%	0.3%	6	0.2%
Sculpin	9.9%	2.2%	6.3%	4.3%	1.9%	3.1%	3.5%	130	4.0%
Halibut	2.3%	1.0%	3.7%	2.3%	1.5%	1.8%	2.9%	70	2.2%
Pollock	0.5%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	2	0.1%
Sablefish	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1	0.0%
Octopus	3.2%	1.0%	0.2%	1.1%	0.9%	3.6%	0.8%	44	1.4%
Snails	0.0%	9.0%	3.3%	11.6%	3.2%	10.6%	0.8%	209	6.4%
Sea Urchin	0.0%	3.0%	7.1%	12.3%	8.1%	2.9%	4.5%	198	6.1%
Tanner	0.0%	1.1%	0.0%	0.3%	6.2%	0.9%	1.3%	47	1.4%
Decor. Crab	0.0%	10.9%	1.6%	1.1%	3.0%	1.6%	6.9%	130	4.0%
Starfish	3.6%	1.0%	0.6%	1.5%	1.9%	1.6%	1.9%	49	1.5%
Sand Dollar	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	1	0.0%
<b>Total</b>	<b>222</b>	<b>625</b>	<b>510</b>	<b>610</b>	<b>467</b>	<b>445</b>	<b>376</b>	<b>3255</b>	<b>100.0%</b>

## Halibut Length

### Kachemak Bay Pacific Cod Pot Gear Fishery

#### Halibut Size Distribution

Size (cm)	n=70	Percent
28	1	1.4%
30	1	1.4%
32	0	0.0%
34	0	0.0%
36	1	1.4%
38	0	0.0%
40	1	1.4%
42	1	1.4%
44	1	1.4%
46	1	1.4%
48	1	1.4%
50	2	2.9%
52	2	2.9%
54	2	2.9%
56	2	2.9%
58	0	0.0%
60	4	5.7%
62	5	7.1%
64	9	12.9%
66	3	4.3%
68	6	8.6%
70	4	5.7%
72	8	11.4%
74	5	7.1%
76	1	1.4%
78	2	2.9%
80	2	2.9%
82	1	1.4%
84	3	4.3%
86	1	1.4%
88	0	0.0%
90	0	0.0%



### **OEO/ADA Statement**

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